IN THE SPECIFICATION

Please enter the following changes in the paragraphs indicated:

Paragraph 40

~~[0040] Figure 9 is a block diagram of an electrode array placed around and in proximity to a wound, using feedback control.~~

Paragraph 41

~~[0041] Figure 10 is a flowchart showing a process of feedback control of wound healing according to one embodiment of the present invention.~~

Paragraph 42

[0042] ~~Figure 11~~ Figure 9 is a graph showing skin biopotential across a wound as a function of healing time.

Paragraph 43

[0043] ~~Figure 12~~ Figure 10 is a graph showing a correlation between impedance and electrical stimulation for phases of wound healing beyond early inflammatory, according to one embodiment of the invention.

Paragraph 72

[0072] If the wound heals evenly across the entire wound, then impedance will change continuously as well as during wound healing. However, what usually happens is that one portion of the wound heals faster than the other. ~~With reference to Figure 9~~ Consider, for example, an elliptical wound ~~is depicted~~ with three electrodes surrounding it: A, B and C. Impedance is measured between point A and B, followed by a pulse of electrical stimulation. Impedance is then measured from point B to C followed by a pulse of electrical stimulation. Impedance is then measured from point C to A followed by a pulse of electrical stimulation. If impedance between A and B shows the wound is not healing, then the stimulation amplitude and pulse waveform will be different than if the impedance is lower from B to C, and C to A, and so on. In other words,

there are three different pulses applied to the wound covering three different portions of the wound. The stimulation waveform and intensity can be varied for each third of the wound as a function of healing.

Paragraph 73

[0073] ~~With reference to Figure 10, a~~ A method to use feedback control is ~~shown~~ now described. A stimulation sequence is started on a first electrode (step 200). Impedance is then measured between the active electrode and other electrodes, and a phase of healing is then determined from the impedance measurement (step 202). The appropriate stimulation current and polarity between the active electrode and other electrodes is then calculated, based upon the phase of healing (step 204). Stimulation incorporating the feedback is then done (step 206). The process begins again at step 200.

Paragraph 74

[0074] With more than the three electrodes ~~shown in Figure 9~~ described above, more of the wound could be controlled, or the current fields can be bent by varying the resistance to ground on electrodes A and C when B becomes active, as an example, so that the shape can also be changed of the stimulation field as well as the current pattern.

Paragraph 76

[0076] The skin biopotentials from good skin on the leg are about –20 mv. When a wound occurs, the skin reverses potential and goes to about +80 mv. As the wound heals, the voltage is reduced back to negative again. With reference to ~~Figure 11~~ Figure 9, a skin biopotential as a function of time resulting from a typical wound on good skin is shown. The time units are arbitrary, as healing may take 1 week, or 2 years, and therefore there is no linear timescale.

Paragraph 82

[0082] As can be seen in the tables, after the initial early inflammatory stage of Phase1, when the impedance is between about 3.1 to about 3.7 ohms per cm of tissue, the electrical stimulation is an AC sine wave with about 250 microsecond pulse width and current of about -10 ma. When the impedance is between about 4.8 and about 5.1 ohms per cm of tissue, the electrical stimulation is an AC sine wave with about 250 microsecond pulse width and current of about -5 ma. Those skilled in the art will understand the use of the qualifier "about" as reference to the normal degree of uncertainty inherent in measurement. These values are shown in ~~Figure 12~~ Figure 10, for phases later than early inflammatory.